ABSTRACT OF THE DISCLOSURE

A method of determining spatial target probability using a model of multisensory processing by the brain includes acquiring at least two inputs from a location in a desired environment where a first target is detected, and applying the inputs to a plurality of model units in a map corresponding to a plurality of locations in the environment. A posterior probability of the first target at each of the model units is approximated, and a model unit with a highest posterior probability is found. A location in the environment corresponding to the model unit with a highest posterior probability is chosen as the location of the next target.